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Physical fitness profile in professional bodyguards

Profession of bodyguard may induce a high level of psychophysiological stress and calls for high demands both for mental and physical capacities. The aim of the study was to describe health related data and physical fitness levels in a group of professional bodyguards of governmental and constitutional officials (n=21, age 37.5 years, range 28.6 to 54.5 years). Body composition was measured by using bio-impedance method (Tanita Mc-980MA), muscular strength was determined by the grip strength dynamometer (Takei T.K.K.5401 Grip D), muscular power was assessed by the completion of the Wingate cycle test and cardiorespiratory fitness was determined by the completion of a VO₂ peak test on a cycle ergometer. In addition, the subjects were examined for blood pressure, blood cholesterol and they were tested for simple visual and acoustic reaction time. The bodyguards demonstrated body fat 18.3±4.0 % and a high amount of fat-free mass 73.9±6.8 kg that corresponds to 109% and 114% of the national population norms. Body mass index attained 26.8±2.6 kg.m⁻² that corresponds to 104% of the population norm. Their grip strength attained 58.8±9.6 kp and 58.8±7.7 kp for the right and left hand, respectively. Those values corresponded to 120 % and 120% of the norm. Peak power and mean power found in the 30s Wingate test (resistance load 10% of body mass) were 992.1±120 W and 815.0±99 W, respectively, and the relative values of peak power and mean power attained 11.0±1.1 W/kg and 9.0±0.9 W/kg. VO₂ peak reached 48.0±5.4 ml.kg⁻¹.min⁻¹ and the peak power output 3.58±0.39 W/kg, that correspond to 126% and 105% of the national population norms. The average systolic and diastolic blood pressure attained 130.3±15.1 and 83.8±7 torr, respectively. High blood pressure (above 140/90) demonstrated six from 21 participants (i.e., 29%). Level of blood cholesterol was 4.54±0.79 mmol.l⁻¹ and the increased concentrations (above 5.2 mmol.l⁻¹) was found in five from 21 participants (i.e. 24%). The simple visual and acoustic reaction time attained 207.8±12.9 ms and 156.0±16.9 ms that correspond to 109% and 92% of the national population norms. Peak power and mean power found in the 30s Wingate test and VO₂ peak values correlated negatively with age (r=-0.57; -0.56; -0.47; p< 0.05). However, blood pressure, blood cholesterol, reaction time and handgrip values were not negatively affected by age. Body fat percentage negatively correlated with the aerobic fitness indices (VO₂ peak r=-0.53, p<0.05; power output r=-0.63; p<0.01) but the main indices of anaerobic performance and other parameters followed in the study were not affected by the percentage of body fat. In conclusion, professional bodyguards could be regarded as individuals exposed to stress and to the consequent health risks. On the other hand, they exhibit above average both anaerobic and aerobic physical fitness that may provide beneficial health effects.

Biography

Jan Heller has completed his PhD from the 1st Medical Faculty of the Charles University in Prague and Postdoctoral studies from Pierre-and-Marie-Curie University, France. He is the Head of Biomedical Laboratory at the Faculty of Physical Education and Sport, Charles University in Prague, Czech Republic. He has published more than 200 papers in reputed journals and has been serving as an Editorial Board Member.

Notes:

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